

Application No.: 10/642,610
Examiner: J. C. Rodriguez
Art Unit: 3653

In the Claims

The claims are amended as shown on the following pages under the heading AMENDMENT TO THE CLAIMS. The list shows the status of all claims presently in the application and is intended to supersede all prior versions of the claims in the application. Any cancellation of claims is made without prejudice or disclaimer.

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A suction nozzle carrier for use with a vacuum suction apparatus to suck workpieces, comprising:

a carrier, said carrier having a plurality of receiving holes respectively connected to said vacuum suction apparatus; and

a plurality of vacuum nozzles respectively mounted in said receiving holes in flush with said carrier and adapted to suck workpieces upon operation of said vacuum suction apparatus, said vacuum nozzles each comprising a valve block, a valve element movably mounted in said valve block and adapted to close/open said valve block, and spring members, said spring members supporting said valve element in said valve block and adapted to force said valve element to close said valve block; and

wherein said valve block comprises a hollow cylindrical shell, said hollow cylindrical shell having a top close side, a plurality of air holes in said top close side, a bottom open side, and a receiving open chamber disposed in communication between said air holes and said bottom open side and adapted to accommodate said valve element and said spring means, and a plug cap fastened to said bottom open side of said hollow cylindrical shell, said plug cap having an axially extended stepped center through a big diameter section and a small diameter section in communication with said receiving open chamber.

2. (Canceled)

3. (Original) The suction nozzle carrier as claimed in claim 1, wherein said valve block has an outer annular groove extended around the periphery thereof and a gasket ring mounted in said outer annular groove and stopped against the periphery of one receiving hole of said carrier.

4. (Original) The suction nozzle carrier as claimed in claim 1, wherein said valve element has a spherical shape.

5. (Canceled)

6. (Currently Amended) The suction nozzle carrier as claimed in claim ~~5~~ 1, wherein said valve block further comprises an inner gasket ring mounted inside said hollow cylindrical shell around said spring members and stopped between said plug cap and a part of said hollow cylindrical shell.

7. (Original) The suction nozzle carrier as claimed in claim 6, wherein said hollow cylindrical shell has an annular shoulder disposed inside said receiving open chamber and adapted to accommodate said inner gasket ring.

8. (Original) The suction nozzle carrier as claimed in claim 1, wherein said carrier is a roll.

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9. (Original) The suction nozzle carrier as claimed in claim 1, wherein said carrier is a conveying device.

10. (Original) The suction nozzle carrier as claimed in claim 1, wherein said carrier is a work table.